

7/047/013

ZIEGLER CHEMICAL & MINERAL CORP.

LITTLE BONANZA OPERATIONS

STAR ROUTE, VERNAL, UTAH 84078

Telephone: (435) 789-3593 Fax: (435) 789-3595

January 7, 2004

D. Wayne Hedberg
Permit Supervisor
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

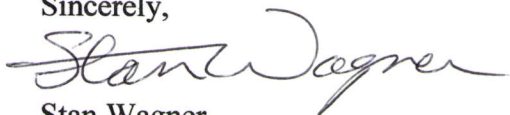
RECEIVED
JAN 12 2004
DIV. OF OIL, GAS & MINING

RE: TCLP test on fly ash and mine water.

Dear Mr. Hedberg,

I have enclosed the results from the TCLP test that we had American West Analytical Laboratories perform for us on the fly ash (from Deseret Transmission and Generation) and our mine water (from the Cowboy mine). This was done on request of the Division in regards to our Large Mine Plan Amendments submitted July 23, 2003.

Sincerely,



Stan Wagner



INORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Zeigler Chemical & Mineral Co.
Date Sampled: November 12, 2003
Project: Cowboy Rec. / Outflow 002-A

Contact: Stan Wagner
Date Received: November 13, 2003

Lab Sample ID:
L57852-01A

Field Sample ID:
Fly Ash

463 West 3600 South
Salt Lake City, Utah
84115

TCLP METALS Method 1311

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result
Arsenic	mg/L	11/20/2003 1:04:32 PM	6010B	2.0	< 2.0
Barium	mg/L	11/20/2003 1:04:32 PM	6010B	0.050	0.64
Cadmium	mg/L	11/20/2003 1:04:32 PM	6010B	0.030	< 0.030
Chromium	mg/L	11/20/2003 1:04:32 PM	6010B	0.050	0.077
Lead	mg/L	11/20/2003 1:04:32 PM	6010B	0.10	< 0.10
Mercury	mg/L	11/20/2003 9:06:58 AM	7470A	0.050	< 0.050
Selenium	mg/L	11/20/2003 1:04:32 PM	6010B	0.50	< 0.50
Silver	mg/L	11/20/2003 1:04:32 PM	6010B	0.10	< 0.10

(801) 263-8686

Toll Free (888) 263-8686

Fax (801) 263-8687

e-mail: awal@awal-Labs.com

Kyle F. Gross
Laboratory Director

Client provided water to be used as the TCLP fluid.

Peggy McNicol
QA Officer

Released by: [Signature]

Laboratory Supervisor

Report Date: November 20, 2003

Page 1 of 3

All analysis applicable to the CWA, SDWA and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached Chain-of-Custody. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



INORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Zeigler Chemical & Mineral Co.

Date Sampled: November 12, 2003

Project: Cowboy Rec. / Outflow 002-A

Lab Sample ID:

L57852-01

Contact: Stan Wagner

Date Received: November 13, 2003

Field Sample ID:

Fly Ash

463 West 3600 South
Salt Lake City, Utah
84115

<u>Analytical Results</u>	<u>Units</u>	<u>Date Analyzed</u>	<u>Method Used</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>
Flashpoint	°F	11/17/03	1010	200	>200
pH	pH Units	11/13/03 5:15 pm	9045C	0	10.90 *
Reactive Cyanide	mg/kg	11/18/03	SEC 8.3	50	< 50
Reactive Sulfide	mg/kg	11/18/03	SEC. 8.3	100	110

* The sample pH was measured in water at 25 degrees Celcius

(801) 263-8686

Toll Free (888) 263-8686

Fax (801) 263-8687

e-mail: awal@awal-Labs.com

Kyle F. Gross
Laboratory Director

Peggy McNicol
QA Officer

Released by:

Laboratory Supervisor

Report Date:

November 20, 2003

Page 2 of 3

All analysis applicable to the CWA, SDWA and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached Chain-of-Custody. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



ORGANIC ANALYSIS REPORT

Client: Zeigler Chemical & Mineral Co.
Collected: November 12, 2003
Received: November 13, 2003

Contact: Stan Wagner
Analyzed: November 19, 2003
Extracted: November 18, 2003

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Analysis Requested: Semi Volatiles by SW 8270C

Lab Sample ID: L57852-01A

Field Sample ID: Fly Ash

Site ID: Cowboy Rec. / Outflow 002-A

Analytical Results for TCLP [CLP Semivolatile Organics by 8270C/3510C

Units = $\mu\text{g/L}$

463 West 3600 South
Salt Lake City, Utah
84115

<u>Compound</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>
Surr: 2,4,6-Tribromophenol	17-138	60.0 %
Surr: 2-Fluorobiphenyl	10-83	31.3 %
Surr: 2-Fluorophenol	10-58	18.8 %
Surr: 4-Terphenyl-d14	10-125	81.7 %
Surr: Nitrobenzene-d5	10-86	30.3 %
Surr: Phenol-d6	10-48	12.4 %
3 & 4-Methylphenol	25	< 25
2-Methylphenol	25	< 25
2,4-Dinitrotoluene	25	< 25
Hexachlorobenzene	25	< 25
Hexachlorobutadiene	25	< 25
Hexachloroethane	25	< 25
Nitrobenzene	25	< 25
Pentachlorophenol	25	< 25
Pyridine	25	< 25
2,4,5-Trichlorophenol	25	< 25
2,4,6-Trichlorophenol	25	< 25

(801) 263-8686

Toll Free (888) 263-8686


Fax (801) 263-8687

E-mail: awal@awal-Labs.com

Kyle F. Gross
Laboratory Director

Peggy McNicol
QA Officer

Client provided water to be used as the TCLP fluid.
Sample was received in incorrect container.

Released by: 

Laboratory Supervisor

Report Date:

November 20, 2003

Page 3 of 3

All analysis applicable to the CWA, SDWA and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached Chain-of-Custody. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.